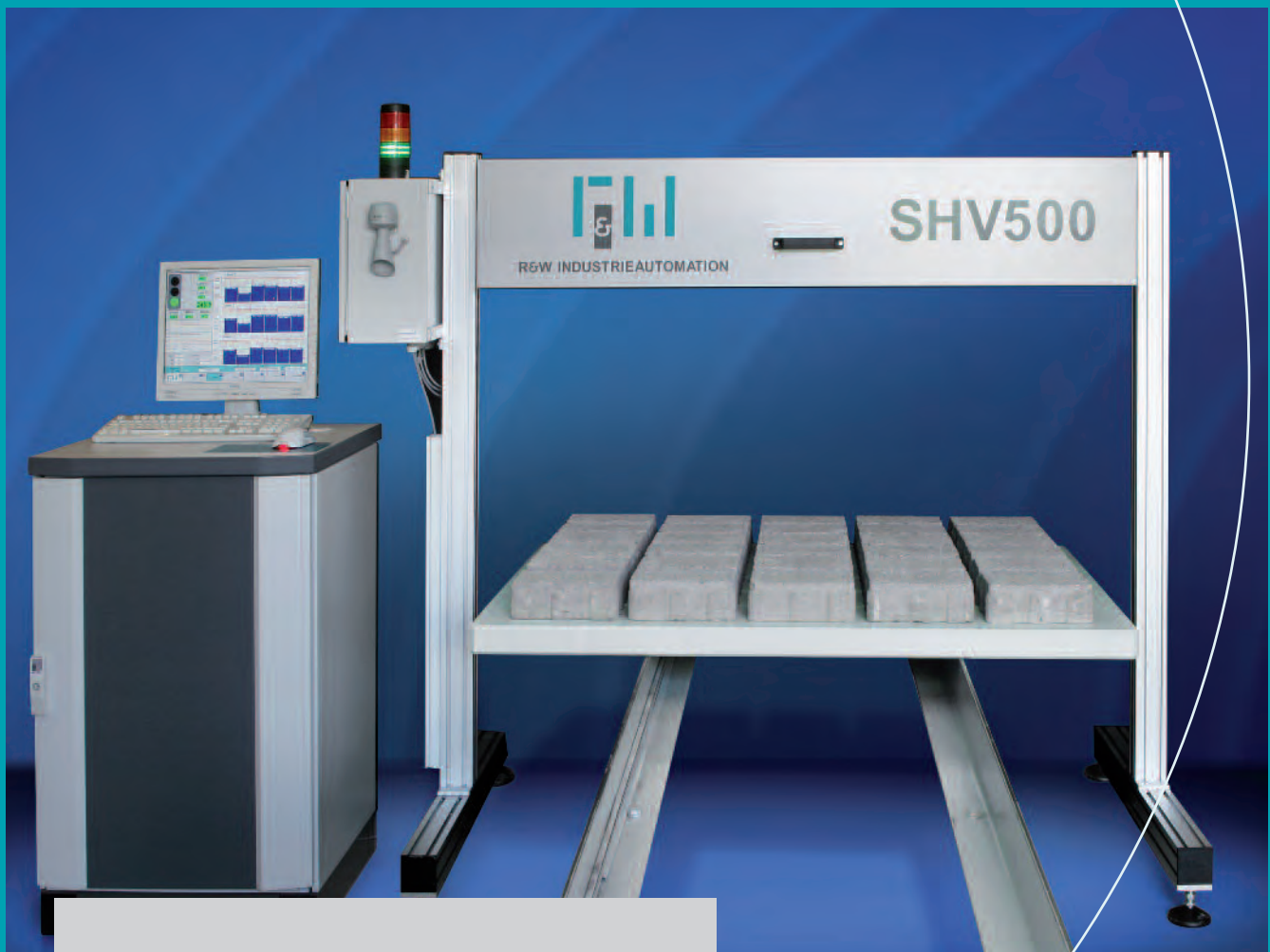
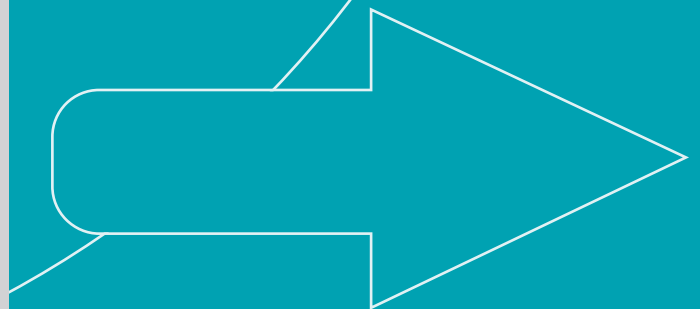


R&W INDUSTRIEAUTOMATION



**Height Control  
System – Simple  
and Precise**



# R&W SHV500 Height Control System



One important measurable variable in the production of concrete products is height. The height control system SHV500 by R&W offers a contact-free measuring of the products by laser scan. The device can be used with concrete block machines from any manufacturer. It can easily be integrated into the control system of the block machine, but can also be used as a stand-alone system.

## Precise Measuring

The SHV500 is located as close as possible behind the block machine and above the board conveyor for the supporting boards. The blocks passing below the device are laser-scanned without contact and measured with an exactitude of  $\pm 0.5\text{mm}$ . The measuring range of the block heights is between 30 and 480mm.

The height of the blocks is determined by measuring the relative height between the top surface of the boards and the top surface of the blocks. This principle of measuring removes the uncertainty arising from varying heights and qualities of baseboards. With up to 2,500 measurements per second the height of one row of concrete blocks is recorded. For the determination of the product height, only the relevant elements of the product surface will be evaluated. Due to this specific measuring process, slants, burrs, indentations or rough surfaces will not falsify the measuring result.



## The HCS500 Block Height Sensor

The central part of the SHV is the height sensor HCS500 by R&W, a high-resolution laser distance sensor equipped with a high-end microcontroller. The sensor combines all components for the block height control. The sensor simply needs to be linked to a network and a power supply and can be operated autarkic.

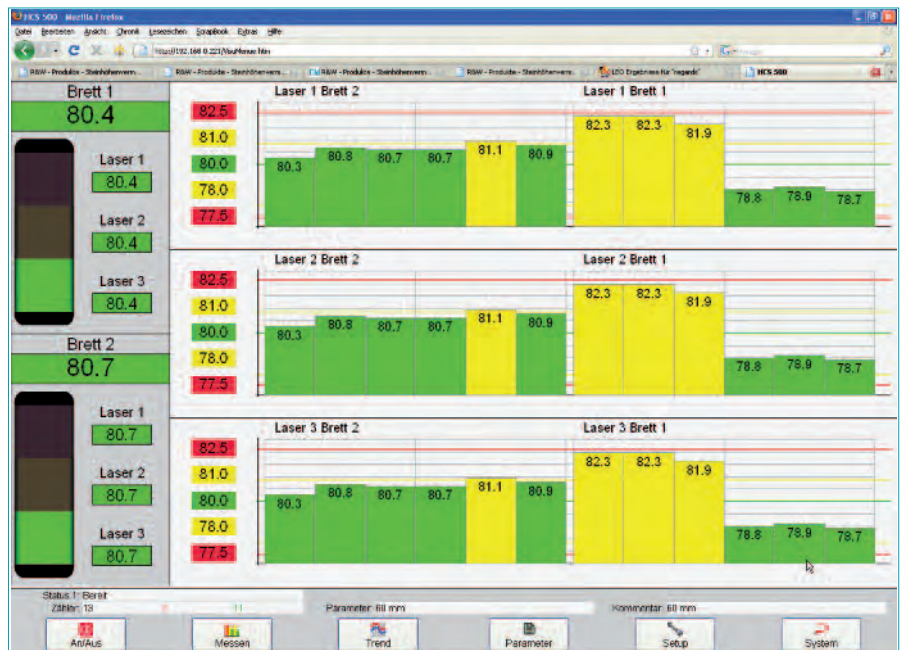
The height control system SHV500 is assembled in modules. The minimum system configuration contains only one HCS500 sensor. In the biggest configuration, three sensors capture different rows of block on a production board. The results are sent to the master sensor and evaluated. Up to five partners can communicate with the sensors and receive the results via the network. The sensors can be linked to control systems, PCs or markers.

The laser sensors are installed on horizontally moving slides travelling along a rail made of aluminium profile. The slides allow to adapt the scan position to the current object to be scanned. This is necessary as various product types need to be scanned.



## User-friendly

The height control system SHV500 is operated via a multi-language web visualisation system. From the values measured by the laser sensors, the individual block heights, mean values for entire rows of blocks and a mean value for the entire layer of blocks are then calculated. The quality of the block height is displayed by the integrated web visualisation in the web browser.



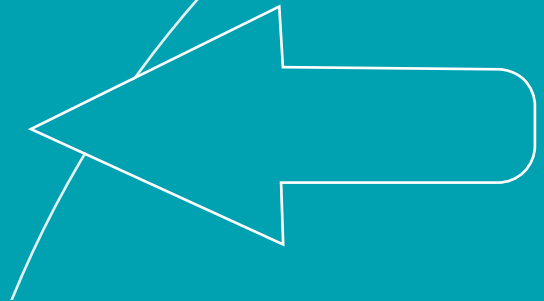
## SHV-VISU

Apart from the web visualisation, a Windows visualisation is available, which provides the following additional functions:

- Filing of measured results
- Graphic display of the filed measuring results
- Display of the filed measuring results in table form
- Filter functions for easy data selection
- Statistical evaluation
- Printing of tables and graphs
- Data export

# Intelligent Height Control System – The advantages at one glance

## Simple Integration in existing Production Lines



- Automatic optimisation of the pre-vibration so that the required block height is maintained even with varying ratios of ingredients.
- Automatic stop of the block maker with warning in case of reject material being produced.
- Automatic activation of the dumping system in case of reject material being detected (e.g. before or after a change of mould or colour).

## The external height control system is more precise than the conventional measuring via mould and tamper head

- The laser height control operates independently of the board thickness (only the relative height between the top surface of the board and the top surface of the blocks is taken into consideration).
- A possible change of block heights from the front section of the board to the back section of the board is displayed, as well as the individual heights of all measured blocks (while the height measuring via mould and tamper head simply measures the average height of the entire board).
- With the main vibration being switched off via stoppers at the tamper head, insufficiently high concrete blocks are not detected reliably.

## Quality optimisation and cost-cutting by reducing rejects

- Improvement of the concrete block quality in terms of height due to automatic optimisation of the manufacturing process.
- Quality control for each board, i.e. no longer by random sampling.
- Evaluation of the recorded measuring results.

Quality Management certified acc. to DIN EN ISO 9001:2000



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